

Larynx.

An
Inaugural Dissertation
on the
Diseases of the Larynx,
submitted
to the examination
of the
Medical Professors
of the
University of Pennsylvania
for the degree of Doctor of Medicine
by
J. Franklin Vaughan,
of Wilmington
Delaware. -
Passed March 7th 1823

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Diseases of the Larynx.

The Larynx is a kind of cartilaginous box, situated at the superior part of the trachea, forming the origin of the entrance to the lungs. It is composed of very delicate and elastic cartilages, united together by membrane and several small muscles.

This structure being the "instrument of the voice" and intimately concerned in the faculty of speech, which is confessedly one of the most important and ennobling attributes that man possesses over the brute creation, its diseases are certainly deserving of much attention, and accurate investigations. — The form of morbid action to which it is most liable, are Cynanche & Phthisis, or Inflammation and Consumption, which will therefore be made the subjects of the following dissertations. —

June 24, 1891

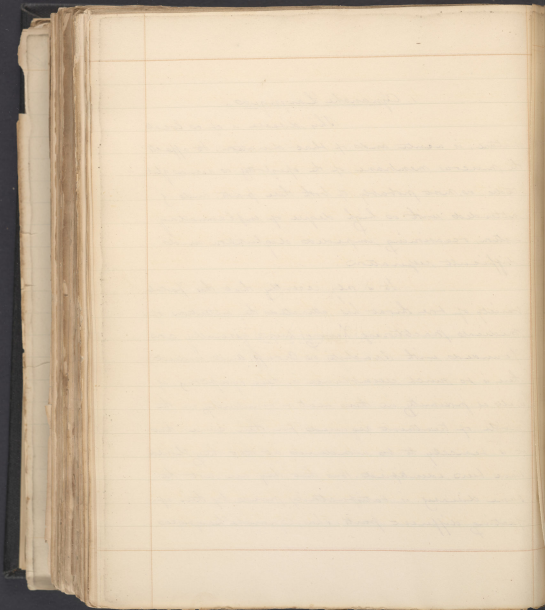
The day was very warm and
the sun was shining brightly
and the wind was blowing
from the south. The water
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1. Cyranche Laryngos.

This disease is of a local nature, is acute and of short duration. It affects the mucous membrane of the epiglottis, or rimas glottidis, or most probably, of both these parts, and is attended with a high degree of inflammatory action, occasioning impeded deglutition and difficult respiration.

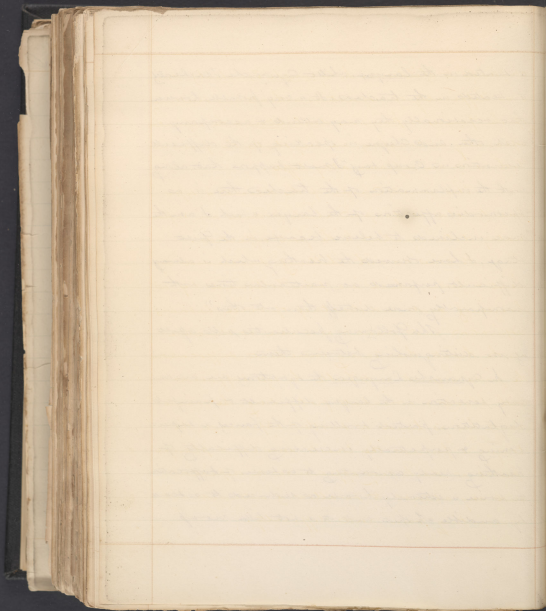
It is only recently that this fatal variety of the throat has attracted the attention of medical practitioners, having been generally confounded with Rachitis or Croup, and indeed there is so much resemblance in their symptoms, of well as proximity in their seat & similarity in the mode of treatment required for their cure, that it is scarcely to be wondered at that they should have been identified. But that they are not the same disease is satisfactorily proved, by their affecting different parts. Thus, Cyranche Laryngos



is seated in the larynx, while Cynanche Trachealis is seated in the trachea. It is very probable, however, that, occasionally, they may attend & accompany each other. And Cheyne, in speaking of the difficult respirations in Croup, says "I must suppose that, along with the inflammation of the trachea, there is as spasmodic affections of the larynx; which I am the more inclined to believe because, in the first stage, I have observed the breathing, which is always difficult, performed at particular times with incomparably more distress than at others."

The following peculiarities will assist us in distinguishing between them.

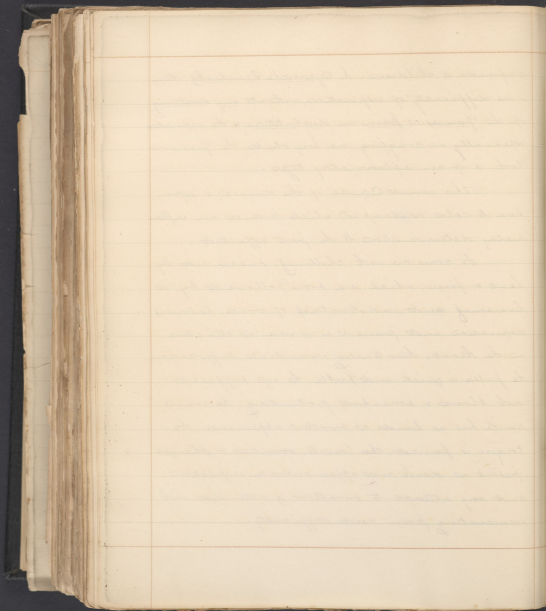
In Cynanche Laryngea, the symptoms are, and are early sensation in the larynx, difficult & painful deglutition, partial swelling of the fauces, a supervening & perpetually increasing difficulty of breathing, nearly amounting to a sense of suffocation; the voice is extremely hoarse or reduced to a scarcely audible whisper; and it is not like croup



confined to children. In Croup & Tracheitis, there is no difficulty of respiration, without any swelling of the Glottis or pain in deglutition, & the expiration especially in coughing, are very shrill; the Fever in both is of an inflammatory type.

The usual Cause of this disease is exposure to cold or damp air, which produces an inflammatory determination to the parts affected.

It comes on with chilliness, succeeded by heat & fever, which are soon followed by, a hoarseness and indistinctness of voice, laborious respiration and pain, as it were, as if stricture, in the throat, threatening immediate suffocation; the pulse is quick and full, the eyes suffused with blood & somewhat protruding, the countenance has a livid or swollen appearance, the tongue is furred, the tonsils, uvula & pharynx present a dark red appearance on inspection, and any attempt to swallow is attended with excruciating pain and difficulty.

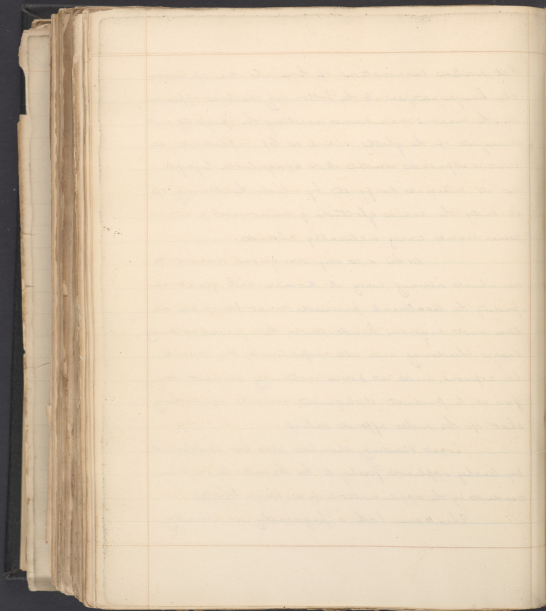


Post mortem examination of those who die of apoplexy, the larynx, reveals the following morbid appearances; the mucous membrane investing the epiglottis and margin of the glottis is, more or less, inflamed, the sinus is effused, under it, no coagulable lymph on its external surface, by which thickening of its sides the rim of glottis is narrowed, & in some severe cases actually closed.

As this is a very dangerous disease & one which always runs its course with great rapidity the treatment pursued must be of an active and vigorous kind. Under these circumstances large bleedings are all important; they must be copious, and, in some instances, carried so far as to produce delirious animus. of nothing short of this will afford relief.

Local bleeding, should also be employed, by leeches applied freely to the throat, to be succeeded by the application of as large blisters.

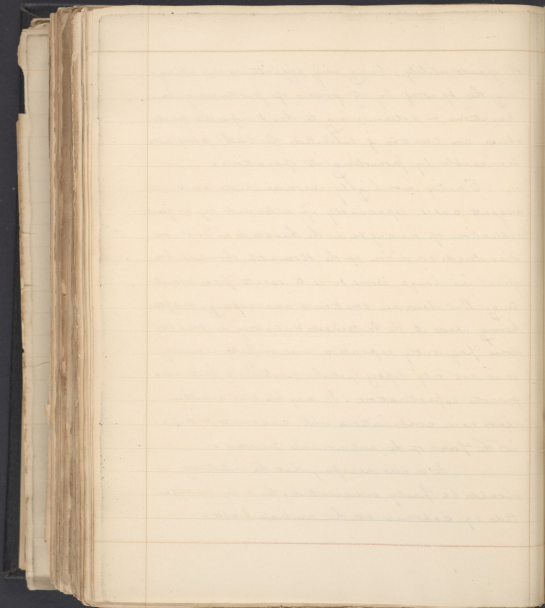
This warm bath is frequently a remedy,



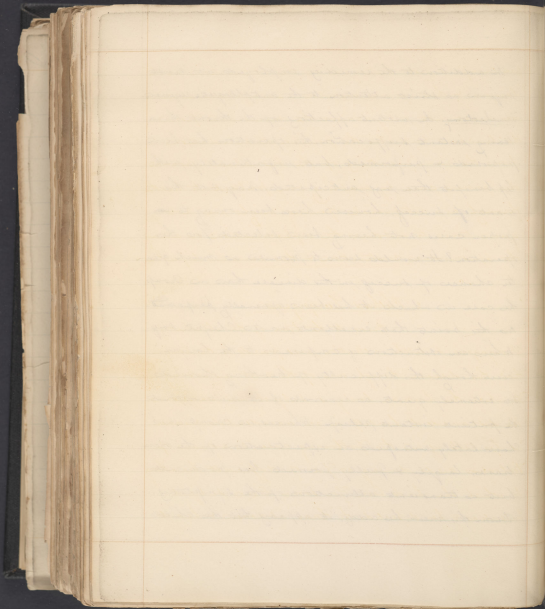
of great utility, being very effectual in allay-
ing the spasm by its power of producing re-
laxation & determining to the surface, and
where an emetic is exhibited the bath proves also
serviceable by promoting its operations.

Emetics are highly recommended, and in
urgent cases, especially if attended by a great
collection of mucus &c in the throat or a full or
disordered condition of the stomach, should be
given in large doses so as to excite free vomit-
ing. But when an emetic is unnecessary, or after
having used it, the continued antimony in small
doses frequently repeated, is as useful remedy,
as it not only lessens febrile excitement but also
promotes expectoration. It may be given either
alone or in combinations with calomel & opium
in the form of the antimonial powder.

It is also necessary that the intestines
should be freely evacuated; this may be effec-
ted by calomel or the neutral salt.



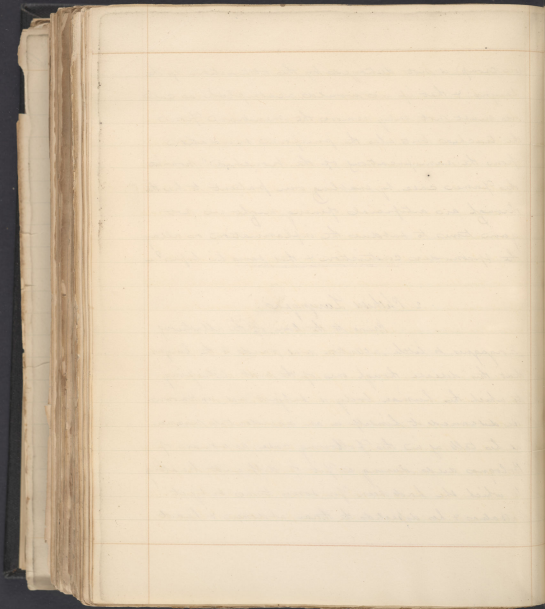
In addition to the remedy employed, we must
pay strict attention to the antiphlogistic regimen.
Tracheotomy. In violent affections of the throat, threat-
ening instant suffocation, this operation has been
proposed & performed, but, unfortunately, with
less benefit than was anticipated. May not this
want of success, however, have been owing to ~~an~~
proper cases not having been selected for the
operation? It would seem to promise as much greater
chances of success in this disease than in Croup,
the case in which it has been generally performed.
On this point that excellent writer, Cheyne, says
"When an obstruction is confined to the larynx,
even though the difficulty of breathing should
be extremely great, as removal of it will afford
the patient instant relief. Whereas, in Croup, as I
have lately intimated, an expectoration of the mem-
branes, largely & fully formed, has produced
but so transient alleviations of the symptoms".
From this view, he adds, it appears that the child



(his croup) is not destroyed by the obstruction of the
larynx; & that if we would accomplish as much
we must not only remove the membrane from
the trachea but also the puriform exudations
from the ramifications of the bronchia". now is
his former case, by enabling our patient to breathe
through an artificial opening, might we not
gain time to subdue the inflammation or allay
the spasmodic constrictions & thus save his life?—

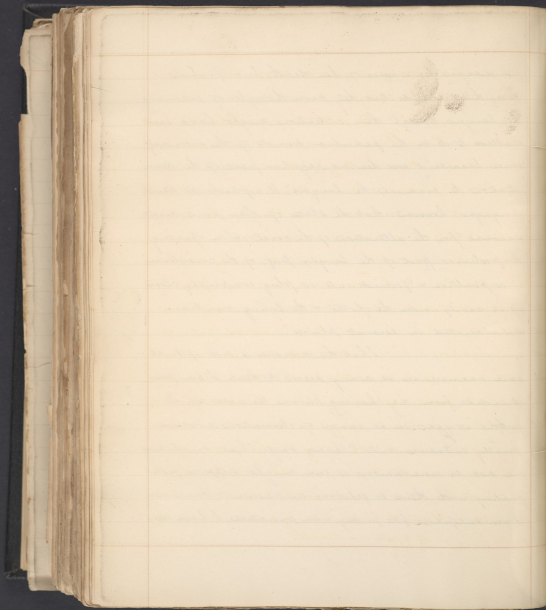
2. Phthisis Laryngea.

Even to the time of the illustrious
Borgagnoni, so little attention was paid to the larynx
that this disease, though one of the most distressing
to which the human body is subject, was unknown.
He discovered it himself in an accidental manner,
as he tells of in the following case; "a woman of
Bologna died during a fit of difficult breathing
to which she had been for some time subject."
Balsaloni & his disciples the throat, abdomen & head



to discover the cause of her death, but found
every thing found. But they never thought of examining
the larynx, though their attention might have been
called to it by the peculiar sound of the woman's
voice, because "it was then no regular part of the demo-
-strations to examine the larynx". It afterwards struck
Morgagnie, however, that the state of these parts, might
account for the alteration of the voice; & "on opening
the posterior part of the larynx, part, of the consistence
of a poultrie & formed into a plug, completely closed
up its cavity, under the glottis, & the lining membrane
was ulcerated in several places".

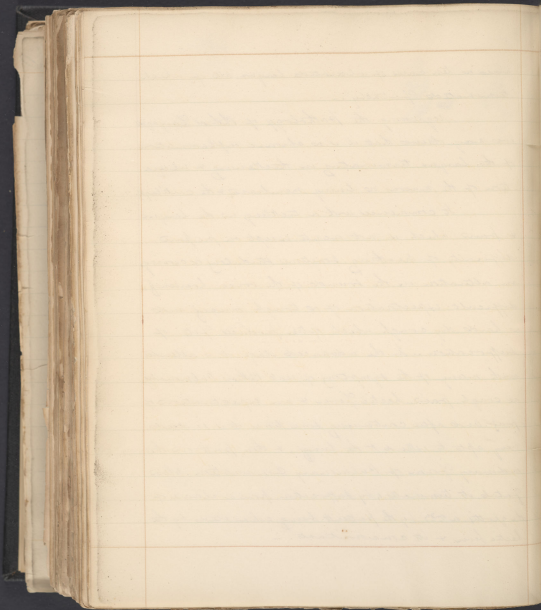
That this disease is not of such
rare occurrence, as many seem to think, I am per-
-suaded, from my having known two cases of it
within as year in a range of observation not un-
-usually extensive. and Cheyne says "that such cases
are not so uncommon as one might suppose from
meeting with them so seldom in medical journals.
I am satisfied; for, in my own practice, I have seen



since no ten cases of ulcerated larynx, all of which terminated "fatally".

Regarding the pathology of Phtisis Laryngea we may observe, that it is a chronic inflammation of the larynx, terminating in thickening & ulceration of the mucous or lining membrane & the cartilages.

It commences with a tickling in the larynx & hoarseness, which is not acute, except on exposure, difficulty of breathing, sometimes stidulous or croupy, an alteration in the sound of the voice, hoarseness, difficult expectoration of so tough mucus and so hard dry cough which often produces fits of suffocation. In the advanced stage it is attended with many of the symptoms of real Phtisis Pulmonalis, as cough, pain, hectic fever & an expectoration of pus, and after continuing some times it is, indeed, very apt to extend to the lungs, & then puts on the ordinary form of Pulmonary Consumption. When fatal, it terminates, 1, by suffocation, from a closure of the glottis, or 2, by the patient being exhausted by the hectic fever & its concomitants. —



Disections, generally show an ulcerations
of different parts of the larynx, and a thickening
of its lining membranes, sometimes so great
that it looks like a layer of flexible cartilage,
and even changes the form of the parts & reduces
the opening of the glottis so much as to admit
only a fine probe, or closes it entirely. In
some instances spicula of bone are found in
the larynx. occasionally portions of the cartilages
are completely destroyed by the ulceration. In one
case, at the examination of which I was present,
the epiglottis was principally affected. one side
of it was entirely worn away by ulceration, & ap-
peared, indeed, as if a piece had been cut off.
In this case, which was considered as one of pulmonary
consumption, the difficulty of swallowing, particu-
larly liquids, was extreme, even threatening instant
strangulation. This cause of this was explained
by the dissection, for the larynx must have been
partially uncovered.

on the subject of the Prognosis, Portals,
an ingenious French writer, says, "Phthisis Laryn-
gealis et Trachealis non tantum per se dangerous
que has veritable phthisis Pulmonaire" admit-
ting this to be true it is still as very fatal dis-
ease, and one which is so apt to terminate in
pulmonary Consumption that it is always to
be dreaded and an early attention paid to
its premonitory signs, that we may endeavor
to prevent, since, when fully formed, it is
often extremely difficult, if not impossible,
to cure it. —

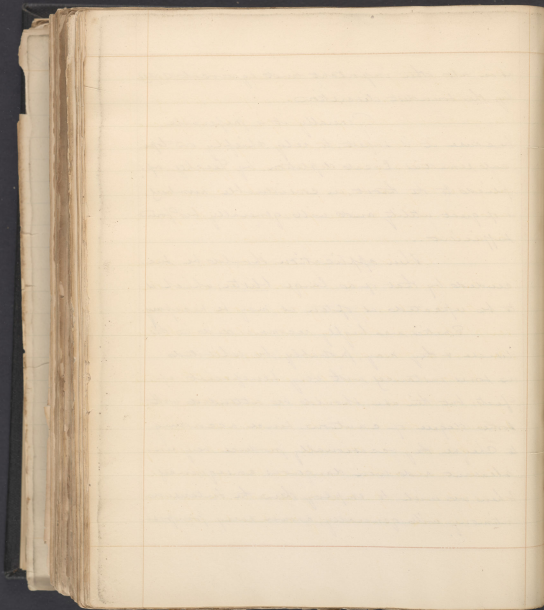
In the treatment of this disease
we must bear in mind, that, though it is an in-
flammatory nature, it will not bear, and
indeed, does not require as copious depletion
as the other form of phthisis. In some instances
moderate venesection may, no doubt, be
employed advantageously, but the lancet
must be used cautiously and regulated.

as in all other important and equivocal cases,
by the soundest discretion.

Generally it is preferable,
because it is safest, to rely chiefly on topi-
cal remedies. Local depletion, by Leeches, ap-
plied to the throat, in considerable numbers,
is of great utility and will generally be found
sufficient.

Their application should be suc-
ceeded by that of a large blister; which is
to be repeated as often as may be necessary.

Emetics are highly recommended in this
disease, & they may, probably, be exhibited
in some instances with very beneficial ef-
fects; but their use should be attended with
some degree of caution, since, according
to Cheyne, they occasionally produce very un-
pleasant and even dangerous consequences.
When we wish to employ them the tartarised
antimony will, generally, answer every purpose.



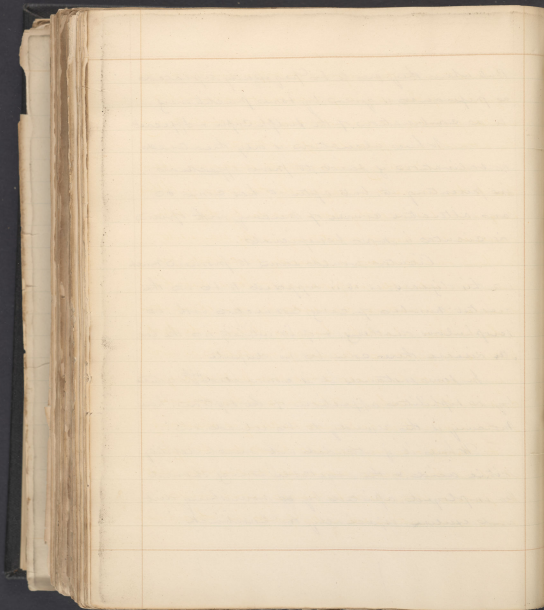
But where they are to be frequently repeated
as preferances is given, by some practitioners,
to a combination of the Sulph. Cupri & Ophecae.

Where ulcerations is only threatened,
or salivation is said to prove expectanda
is preventing it, but after it has come on
and an alterative course of Mercury with Opium
is cicutas is more beneficial.

Cicuta would seem to promise much
in this disease, as it is supposed to be, in the
greater number of cases, connected with a
scrupulous dieting; & of its utility in the late
the disease there can be no dispute.

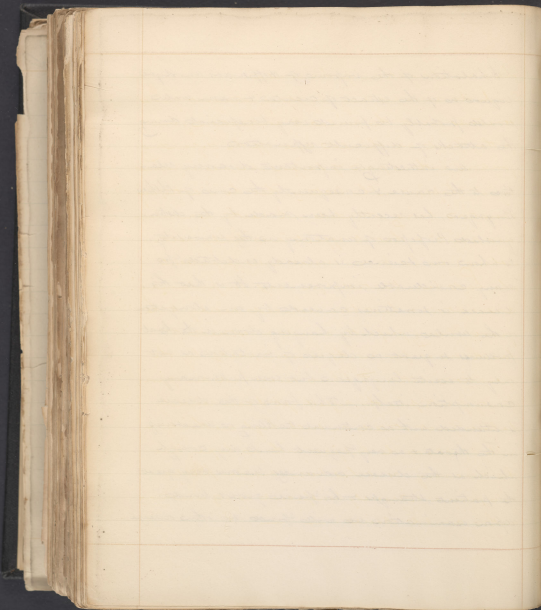
In some instances it is connected ^{with} the cause
by, or pphilitic affections of the system; here
Mercury is the remedy to be relied on.

Where it is attended with much debility
nitric acid & the vegetable tonic should
be employed; assisted by a nourishing diet
and exercise, especially on horseback.



Inhalation of the vapours of Hoffman's anodyne liquor or of the extract of cicuta & warm water would probably be found very beneficial during the attacks of difficult respiration.

An interesting & important discovery relative to the cause, & consequently the cure, of Whooping Cough, has recently been made by the distinguished Professor of anatomy in this University, to whom our science is already indebted for many considerable improvements. It is, that this disease is sometimes caused by an elongation of the uvula, which by hanging down in the throat produces so great a degree of irritation as not only to excite whooping cough but even pulmonary consumption itself. — This form of the disease is attended with a continual tickling or uneasiness in the throat & a very frequent hard dry cough, which as the disease advances becomes very great, the patient struggles & his face grows livid. Upon examination we will find no other disease



shows an elongation of the wind.

In this case we may, by strong astringent gargles sometimes excite the wind to contractions; but if they fail, we should cut off the depending portions with a pair of Scissors. We are informed by Dr. Chapman, in his lecture, "that this is a trifling operation, being attended with neither hemorrhage nor pain"; & that its effects were truly astonishing; he has known several cases of patients who had been treated for years for pulmonary consumption, & had been reduced nearly to the grave, "being perfectly cured & restored to health in a few months, or even weeks, by the operation". Although I have never had an opportunity of witnessing this myself, yet I can readily believe facts stated on such high authority, & will conclude the subject with a hope, that the discovery, as it has been made public, will prove as extensively beneficial as its illustrious author could desire. —

